

SPECIFICATION AMENDMENTS

Please amend paragraphs 0001-0003, 0006, 0010, 0014, 0018, and 0035 of the substitute specification filed June 16, 2006, as follows.

[0001] The present invention relates to a device for severing a hollow profile shaped according to ~~a~~ an internal high pressure forming process.

[0002] U.S. Patent 5,941,112 discloses a device for ~~the~~ internal high pressure forming and severing of an elongated workpiece transversely to its longitudinal extent. The device has a shaping tool which consists of four adjustable individual molds which are adjusted via hydraulic cylinders. In the joined-together state, the four individual molds define a cavity into which the workpiece to be formed is inserted in the crude state. In addition, the device has an encircling cutting edge which is arranged at an encircling recess and severs the shaped hollow profile at a corresponding internal pressure transversely to its longitudinal extent. Provided at the ends of the hollow profile at a closure of the hollow profile are sealing elements which prevent an escape of the pressure medium during the forming operation.

[0003] German document DE 199 09 928 C2 discloses ~~a~~ an device for the partial or complete severing of a hollow body shaped according to a internal high pressure forming process. Furthermore, the device has an encircling cutting edge, assigned to which is a supporting body which is arranged to be movable in

such a way that it supports that region of the hollow body which is deformed during the cutting operation. The supporting body is inserted into a recess of the tool and surrounds the hollow body. Adjoining the cutting edge is a retaining ring. For the purposes of the internal high pressure forming of the hollow body, the device, the cutting ring and the retaining ring therefore form the requisite bearing surfaces. For the purposes of severing the hollow body, the retaining ring is axially displaced, so that the deforming region of the hollow body can expand radially and extend into the recess. The hollow body is therefore first formed and is then severed by the cutting edge released by the axially displaced retaining ring.

[0006] ~~In particular during the~~ During severing of the hollow profiles, undesirable leakage and thus a loss or escape of the pressure medium may occur on account of the high internal pressure. Such an escape of the pressure medium firstly contaminates the device for parting the hollow profiles and secondly makes it difficult to cut neatly through the hollow profiles due to the sudden pressure drop.

[0010] This offers the ~~great~~ advantage that, on account of the sealing elements, the parting operation can also be effected during a calibrating operation, at the end of which a hollow profile blank bears completely against the inner wall. In the process, the sealing elements arranged on both sides of the cutting edge prevent the internal pressure from dropping after severing of the hollow profile. In addition, due to the pressure medium being prevented from penetrating

between the hollow profile and the device, it is possible to carry out the parting operation before the end of the calibrating operation. The parting operation is therefore uncoupled from the calibrating operation and can also be arranged independently of the calibrating pressure.

[0014] According to an advantageous development of ~~the solution according to~~ the invention, the cutting edge is formed at the transition between the inner wall and the recess. Provision may be made here for the cutting edge to be designed either as an interchangeable parting blade or as an interchangeable cutting edge or for the cutting edge to form an integral part of the inner wall. The interchangeable design of the cutting edge offers the advantage that, after a predefined number of cutting operations, after which the cutting effect of the cutting edge naturally markedly decreases, the cutting edge can simply be exchanged. On the other hand, with a cutting edge integrated in the inner wall, a possible diversity of individual parts of the device is reduced, so that, to renew the cutting edge, it is merely necessary to replace the region of the wedge-shaped recess having the cutting edge. This can offer advantages, for example, during repair or maintenance work, since complicated reception or removal of the cutting edge is dispensed with.

[0018] ~~It goes without saying that the~~ The abovementioned features and the features still to be explained below can be used not only in the respectively specified combination but also in other combinations or on their own without departing from the scope of the present invention.

[0035] In a device 1 for severing a hollow profile 2, shaped according to the internal high pressure forming process, transversely to its longitudinal extent 3, the invention makes provision for sealing elements 7 to be provided on an inner wall 6 of the device 1, these sealing elements 7 being arranged on both sides of an encircling cutting edge 4. The cutting edge 4 is in this case arranged in or at an encircling recess 5 and, for example, ~~is of~~ has sides 13 forming a wedge-shaped design in profile.